# Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Southwest Florida

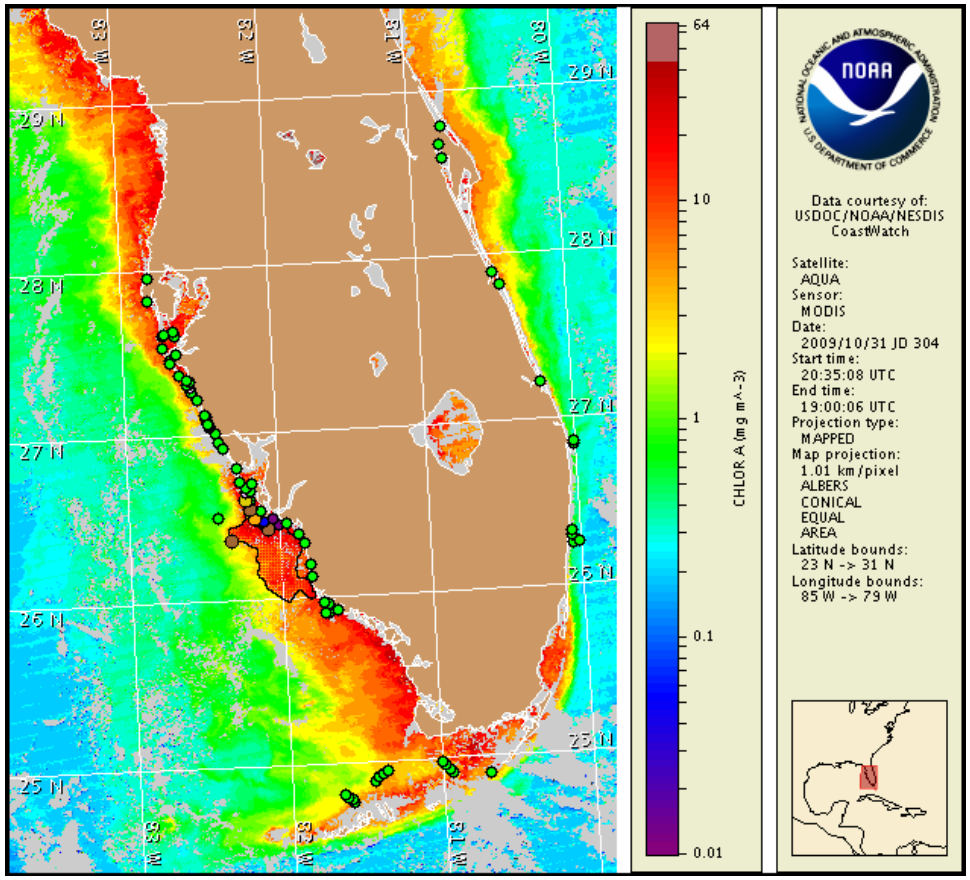
2 November 2009

NOAA Ocean Service

NOAA Satellites and Information Service

NOAA National Weather Service

Last bulletin: October 29, 2009




Satellite chlorophyll image with possible HAB areas shown by red polygon(s). Cell concentration sampling data from October 23 to 30 shown as red (high), orange (medium), yellow (low b), brown (low a), blue(very low b), purple (very low a), pink (present), and green (not present). For a list of cell count data providers and a key to the cell concentration categories, please see the HABFS bulletin guide:

http://tidesandcurrents.noaa.gov/hab/habfs_bulletin_guide.pdf

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## Conditions Report

A harmful algal bloom has been identified onshore northern and central Lee County, in the Pine Island Sound/San Carlos Bay region in Lee County, and offshore southern Lee and northern Collier counties. Patchy moderate impacts are possible today through Wednesday in northern and central Lee County and in the Pine Island Sound/San Carlos Bay region in Lee County. No impacts are expected elsewhere alongshore southwest Florida today through Wednesday, November 4. Dead fish and discolored water have been reported offshore central Lee County over the past few days.

## Analysis

A harmful algal bloom has been identified onshore northern and central Lee County, in the Pine Island Sound/San Carlos Bay region in Lee County, and offshore southern Lee and northern Collier counties. Samples taken on 10/30 indicate background concentrations of *K. brevis* near the Cabbage Key area of Pine Island Sound (FWRI). Samples collected from Merwin Key and between Long Point and York Island indicate very low a and very low b concentrations, respectively (FWRI; 10/30). Low a and low b concentrations were found at Redfish Pass and Captiva Pass (FWRI; 10/30). A sample taken at Buck Key indicates medium *K. brevis* concentrations (FWRI; 10/30). Recent samples indicate that *K. brevis* is no longer present in Boca Grande Pass (FWRI; 10/30).

Recent samples in the Sanibel Island region of Lee County indicate medium *K. brevis* concentrations near the Sanibel Causeway Ramp (FWRI; 10/30) and Algiers Beach (FWRI; 10/29). Very low a and low a samples were identified in the Lighthouse Beach and Tarpon Beach areas of Sanibel Island, respectively (FWRI; 10/28).

Extensive fish kills and discolored water have been reported in central Lee County, approximately 10 miles southwest of Sanibel Island (FWRI; 10/29, 11/1). Respiratory irritation has been reported at Tarpon Bay off the north coast of Sanibel Island (MML; 11/1).

Additional samples collected alongshore Pinellas, Manatee, Charlotte, and Collier counties all indicate that *K. brevis* is not present (FWRI, MML, SCHD; 10/26-30). Samples taken offshore northern Monroe County and in the Florida Keys also indicate that *K. brevis* is not present (MML; 10/22-29). Two of numerous samples taken alongshore Sarasota County indicate background concentrations (SCHD, MML; 10/26); all other samples indicate that *K. brevis* is not present.

MODIS satellite imagery (10/31) indicates elevated to high chlorophyll levels (>7 $\mu$g/L) alongshore Lee and northern Collier counties. Patches of high levels of chlorophyll (>10 $\mu$g/L) offshore central to southern Lee county, southwest of Sanibel Island, and offshore northern Collier County are also visible. Generally, patches extend from northern Lee County (26°46'21''N 82°6'38''W) to south of Sanibel Island (26°21'30''N 82°0'41''W). Another patch of elevated to high chlorophyll (>5 $\mu$g/L) is visible offshore northern Collier County centered at 26°7'51''N 82°0'50''W. Continued sampling throughout this region is recommended. Elevated to high chlorophyll levels (>3 $\mu$g/L) are also present alongshore and offshore Pinellas County. Samples from this region did not contain *K. brevis*.

Forecasted winds increase the potential for bloom intensifi cation and further bloom formation alongshore southwest Florida today through Wednesday November 4. Wind conditions indicate the potential for southward alongshore transport as well as extension of the bloom into southern Lee County today and tomorrow.

Due to technical diffi culties SeaWifs imagery is currently unavailable. MODIS imagery is displayed on this bulletin.

Derner, Urizar

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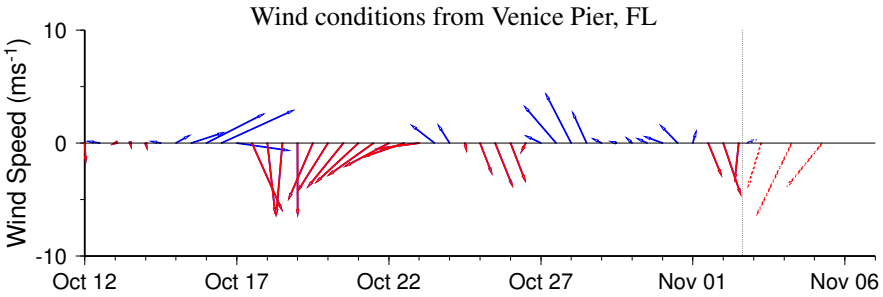
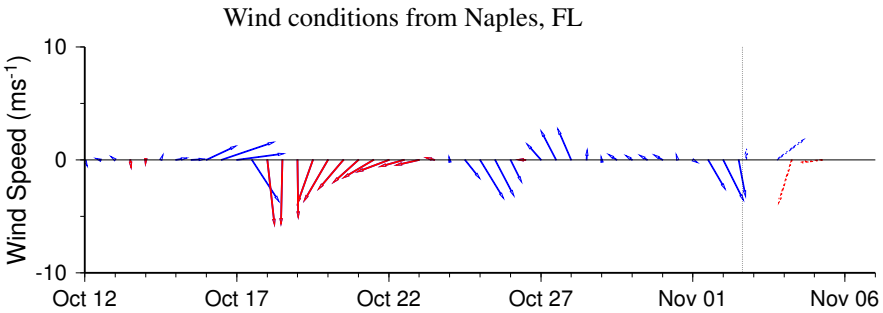



Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts. Wind observation and forecast data provided by NOAA's National Weather Service (NWS).




## Wind Analysis

Southwest Florida: North winds (5-10 kn, 3-5 m/s) today through Tuesday. Northeast winds Tuesday night through Wednesday night (15 kn, 8 m/s).

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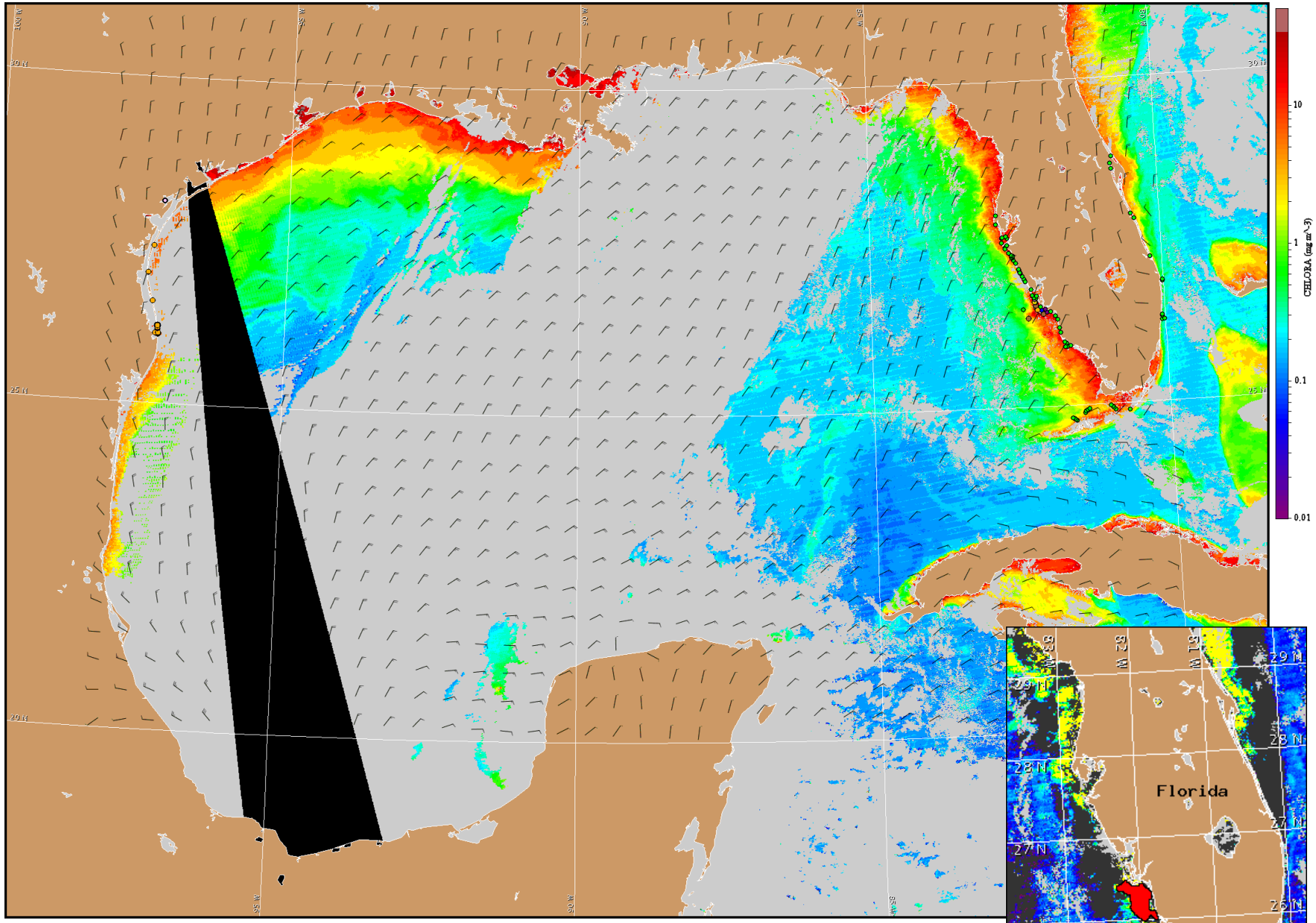
To see previous bulletins and forecasts for other Harmful Algal Bloom Bulletin regions, visit the NOAA CoastWatch bulletin archive: http://coastwatch.noaa.gov/hab/bulletins_ns.htm




Satellite chlorophyll image and forecast winds for November 3, 2009 12Z with Cell concentration sampling data from October 23 to 30 shown as red (high), orange (medium), yellow (low b), brown (low a), blue(very low b), purple (very low a), pink (present), and green (not present). For a list of cell count data providers and a key to the cell concentration categories, please see the HABFS bulletin guide:
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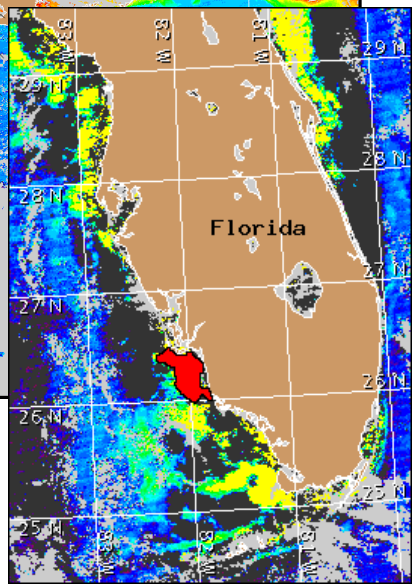


Verifi ed and suspected HAB areas shown in red. Other areas of high chlorophyll concentration shown in yellow (see p. 1 analysis for interpretation).